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24 July 1985

# USSR Report

HUMAN RESOURCES

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USSR REPORT  
HUMAN RESOURCES

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LABOR

ALIYEV, PONOMAREV ATTEND MEETING ON ROLE OF STUDENT LABOR

PM121130 Moscow PRAVDA in Russian 29 May 85 Second Edition p 2

[TASS report: "School of Labor, School of Life"]

[Text] For many VUZ and secondary specialized educational establishment students the summer vacation will again be a labor session. They will spend the vacation in student detachments, which have earned a good reputation as schools of labor and schools of life.

At its routine session on 27 May the Commission for Holding International Youth Year in the USSR examined the question of the work of ministries and departments in creating the necessary conditions for the productive labor, daily life and leisure for student detachments in the summer of 1985 in the light of the demands of the CPSU Central Committee April (1985) Plenum.

It was noted that the patriotic movement of student detachments is an important factor in the labor, ideological, political and moral education of students and an effective means of involving young citizens in the affairs of the country and the concerns of the Communist Party and the people.

Approximately 800,000 members of student detachments will participate in the 1985 summer work. Emissaries from VUZes and technical colleges will work on projects in West Siberia and the RSFSR Non-Chernozem Zone, the Baykal-Amur Mainline on nuclear and hydroelectric power projects, main oil and gas pipelines, and major territorial production and fuel and energy complexes. They will give practical assistance to almost 50 ministries and departments, working on construction sites and in agriculture, in the food and processing industries, in railroad transport, the service sphere, health care and trade.

This time the all-union student detachment is to fulfill construction and installation work and produce output worth more than R1.5 billion and participate in the erection of 30,000 industrial, housing, consumer and socio-cultural projects. More than 300,000 young men and women will be employed in agriculture. One in 5--160,000 students in all--will work in specialized detachments, using the skills which they are acquiring at VUZes. More than 10,000 students have expressed the wish to work in unpaid labor detachments.

Some 12,000 foreign young men and women who are studying at Soviet VUZes or visiting from socialist countries will work in the student detachments together with Soviet young people.

Conscious of their special responsibility for conducting the labor semester at a high organizational and political level in the year of preparations for the 27th CPSU Congress, the members of student detachments are also preparing for great sociopolitical work. Shock labor days will be held for the 12th World Youth and Students Festival Fund, and the construction of Gagarin City, its provision with public services and amenities, patronage of war and labor veterans, and work with juveniles will be continued.

The Komsomol Central Committee and the USSR Ministry of Higher and Secondary Specialized Education are carrying out all work on creating conditions for the highly productive labor, daily life and leisure of constructing detachment members jointly with the ministries and departments receiving the student detachments. The session noted that effective assistance in this matter is being provided by the USSR Ministries of Communications, Power and Electrification, Timber, Pulp and Paper, and Wood Processing Industry, and Health and the RSFSR Ministry of Highways.

At the same time it was noted that there are shortcomings in the course of preparing for the upcoming labor semester. Individual ministries and departments--the USSR Ministry of Agriculture, the USSR Ministry of Land Reclamation and Water Resources, the Ministry of Construction in the Far East and Transbaykal Regions, the USSR Ministry of Construction and the USSR Ministry of Construction of Heavy Industry Enterprises--sometimes put in requests for student detachments of a certain size without making the necessary calculations--as a result of which the detachments are not provided with the necessary range of jobs and construction materials. Student detachments are frequently used on secondary projects and subsidiary and unskilled jobs. It was especially emphasized that the team contract method and the computing of savings and thrift are not used enough in the work of student detachments.

[PM121132] Proper concern for the timely creation of normal conditions for accommodating students and organizing their daily life and feeding is not shown in a number of places and organizations. Certain economic leaders are not paying the necessary attention to the observance of labor safety norms and accident prevention rules.

In the time remaining until the start of summer work the commission instructed union and republic ministries and departments to eliminate the existing shortcomings in the local organization of the activities of student detachments and to take measures to create the necessary conditions for their highly productive labor and healthy daily life and leisure. Economic leaders should assign to each line detachment responsible persons from among the experienced engineering and technical personnel for the whole duration of its presence on the projects.

The ministries and departments to whose organizations and enterprises student detachments will be sent must, in conjunction with the Komsomol Central

Committee and trade union central committees and councils, implements measures aimed at further improving educational and mass cultural work in student detachments and creating a healthy moral atmosphere in them which will, in the highest degree, contribute to the molding of young specialists--the future leaders of labor collectives. Special attention is to be paid to the complete eradication of liquor abuse in student detachments.

The Komsomol Central Committee proposal to develop all-union socialist competition among republic, kray and oblast student detachments was supported. Its purpose is to achieve high labor productivity and quality in the work carried out, the broad introduction of progressive labor organization methods, and the activation of ideological educational and sociopolitical work. The USSR Gosplan, the USSR Light Industry Ministry, and the USSR Trade Ministry are instructed to provide for the production and sale of the necessary quantity of work clothes for student detachment members in accordance with requests from the Komsomol Central Committee Student Detachments Central Staff.

The session also heard a Komsomol Central Committee information report on the coordination with the fraternal socialist countries' youth unions of activities in conducting International Youth Year events, as well as a report on the work of the USSR State Committee for Foreign Tourism, the AUCCTU Central Council for Tourism and Excursions, and the Komsomol Central Committee's "Sputnik" International Youth Tourism Bureau in preparing to receive guests of the 12th World and Students Festival.

The session was addressed by G.A. Aliyev, chairman of the Commission for Holding International Youth Year in the USSR, member of the CPSU Central Committee Politburo, and first deputy chairman of the USSR Council of Ministers.

Participating in the work of the commission session were B.N. Ponomarev, candidate member of the Politburo and secretary of the CPSU Central Committee; AUCCTU chairman S. A. Shalayev; V.M. Mishin, first secretary of the Komsomol Central Committee; B.N. Yletsin and S.V. Chervonenko, chiefs of CPSU Central Committee sections; and other senior officials of the CPSU Central Committee, the USSR Council of Ministers, ministries and departments.

CSO: 1828/163

LABOR

BRIGADE ORGANIZATION OF ENGINEERS URGED

Moscow SOTSIALISTICHESKIY TRUD in Russian No 2, Feb 85 pp 44-47

[Article by A. Zhdamirova, candidate of economic sciences, and N. Makarov, an engineer economist: "The Brigade Organization for Engineer Work"]

[Text] It is known what a large role the workers in design organizations have been called upon to play in solving one of the main tasks now facing the Soviet people -- accelerating scientific and technical progress and sharply improving production efficiency based on it. All of this requires an increase in the labor productivity of designers and an improvement in its quality. An effective way to solve this task is to use the brigade form for organizing and stimulating work.

The brigade form for organizing and stimulating work was introduced for the first time in the country in the Ulyanovsk Leading Special Design Bureau for Heavy and Milling Machines (UGSKBFS). The purpose of the shift to the new form for organizing work is to insure the carrying out of an ever growing volume of design work using the smallest number of workers, to increase the quality of the work and to decrease the time for carrying it out. The achievement of these goals depended a great deal on the organization for stimulating the designer's work. In 1982, the USSR State Committee for Labor and Social Problems and the AUCCTU adopted a resolution entitled "On the Introduction, as an Experiment, of the New System for Paying for the Labor of and the Awarding of Bonuses to Workers Based on Final Work Results Into the Design Brigades of the Ulyanovsk Leading Special Design Bureau for Heavy and Milling Machines (UGSKBFS)." The savings in the wage fund, which are formed by increasing the designer's labor productivity and decreasing the periods for creating new equipment and introducing it into production, serve as the source for encouraging workers under the new system.

The work of the brigades is organized in accordance with the existing recommendations on the brigade form for organizing the work of industrial workers, which were approved by the USSR State Committee for Labor and Social Problems and AUCCTU Secretariat Decree No 86/5-102 dated 20 March 1981. Different categories of designers are included in the composition of the brigades. The size of the collectives varies from 10 to 40 individuals. It is calculated based on the planned input for the design task and the labor expenditure norms in

effect. A brigade leader (this is frequently the chief engineer of the project) heads the collective. He relies in his work on the brigade's council which as a collective leadership body carries out the decisions of the general meetings, reviews and approves measures to improve work, and takes steps to implement them jointly with the brigade leader.

The design bureau administration issues to each brigade an order which points out the objective of the work (a machine tool or assembly), its main qualitative indicators and technical parameters, the design period, the required number of workers, and the estimated wage fund. Progressive and consolidated standard times for completing the design work serve as the basis for the single order for the brigade.

The brigade examines the administration's proposal at a general meeting and, having calculated its capabilities, puts forward a "counter-plan" to decrease the design periods, determining the possible savings in the wage fund for stimulating the labor of the workers. Finally, the order is drawn up in the form of a contract between the administration of the design bureau and the brigade. It confirms the indicators for fulfilling the design task, which were mentioned above. A schedule for carrying out the individual work stages is established based on the obligations that have been adopted by the brigade.

The brigade's earnings are made up of the tariff pay, additional collective earnings and bonuses from the design bureau's material incentive fund for the fulfillment of the indicators and conditions of production management activity. The source for the formation of collective piece-rate additional earnings in a brigade is the growth in labor productivity, the decrease in the number of workers as opposed to the norm, and the shortening of the periods for developing designs. Along with this, additional earnings are also formed based on the savings that are connected with the absence of individual workers (illness, short-term leaves without pay). Every month, each brigade member receives a salary (advance) no less than the official pay rate with the prescribed additions (proportional to the time worked). The assets, which remain after the payment of the advance, are held in reserve and distributed in the form of wages after the design has been handed over to the requestor. A total of 75 percent of the mentioned assets are expended during this after the workers hand over the drawings for each assembly, and 25 percent -- after the handing over of the design as a whole.

The additional collective earnings and bonuses from the construction bureau's material incentive fund are distributed within the brigade considering each member's labor participation coefficient in the achievement of the final result. A special "labor participation coefficient statute" has been developed. The size of the coefficient is calculated based on individual labor productivity, the quality of the work performed, and the professional skill and creativity of the brigade member. In accordance with the labor participation coefficient, the additional earnings vary from 5-40 percent of the official pay rate. When mistakes are detected in the design, the brigade corrects them without an additional payment. At the same time, the total expenditures for this correction are reduced, but by no more than 30 percent of the amount of the bonuses which are paid from the material incentive fund for the final design.

In order to raise the material incentives of the design bureau's leading workers in establishing the most favorable conditions for the brigades, they are also awarded bonuses from the material incentive fund over and above the bonuses that have been provided for fulfilling long-term subject plans.

Excellent results were obtained in the design bureau during the first three years of the experiment:

- 1) The new working conditions and the search for additional reserves for increasing the designers' labor productivity evoked the need for a modern scientific work organization and the development of an integrated system for mechanizing and automating design work (the organization of work positions was improved, organizational technical systems and copy-free duplication of drawings were introduced, etc.);
- 2) The volume of work grew by 18 percent, and labor productivity was also significantly increased. During this, the average monthly earnings of a single worker in the brigade grew by 26.5 percent. The annual additional payment to each designer from the brigade's additional earnings averaged 28 percent of the official pay rate. The salaries of the workers, who were employed in the brigades with payments based on final results, was 21.5 percent higher than the salaries for the design bureau as a whole. The average salary of the more qualified designers is usually 250-300 rubles a month, and that for the less qualified ones is 150-200 rubles. This contributed to the attachment of qualified personnel and to the increase in labor efficiency;
- 3) In connection with this, the technical level and the quality of the designs being developed are gradually increasing, and the periods for building and incorporating new items into production are being decreased. Thus, during 1982 alone, the estimated economic effect from using Ulyanovsk Leading Design Bureau for Heavy and Milling Machines scientific research and experimental design works exceeded seven million rubles -- this was confirmed by industry;
- 4) The creative activity of the designers was significantly intensified. During 1982 alone, the brigade members issued 86 streamlining proposals whose economic effect from their incorporation was almost 100,000 rubles. The USSR Council of Ministers State Committee for Inventions and Discoveries issued nine author's certificates for inventions to the design bureau's brigade workers and eight inventions received positive decisions during the period of the experiment;
- 5) Democratic principles in managing the collective were strengthened. Collective responsibility for the results of their work was raised, and labor discipline was strengthened;
- 6) The microclimate in the brigades was improved, and the collectives became more united and steadfast. Personnel turbulence in the design bureau has been lowered 1.5-fold during recent years.

Thus, the experience from using the brigade form for organizing and stimulating the work of designers testifies to its positive effect on all the basic indicators for the activity of the design bureau.

The Ulyanovsk workers have followers. Based on the experiences of the Ulyanovsk Leading Special Design Bureau for Heavy and Milling Machines, the brigade form for organizing and paying the workers for their labor has been introduced as an experiment in four design and design technological departments in the Tekhnolog Scientific Production Association (Tashkent) and in the Dneprogiproshakht Design Institute (Dnepropetrovsk).

Following the same goals and taking the experience of the Ulyanovsk workers into consideration, the directors and specialists of the Tekhnolog Scientific Production Association have tried to significantly improve the norm setting for design work. This is raising the effectiveness of the brigade form of work. A temporary statute on norm setting for design work in designing non-standard equipment has been developed based on branch and inter-branch norms. It distributes the entire range of design work being performed based on difficulty groups. Specific time norms for developing technical designs, components, drawings, operating documents, etc., for the different qualification levels of the engineer technical workers have been established, i.e., a calculated base has been established for planning and evaluating the work of each worker separately and of the brigade as a whole.

The brigades were created on the basis of the sections which existed in the departments that specialized in specific design and technological work avenues. The effectiveness of the brigade's work grew quite a bit during a short period of time (1981-1983).

Whereas the labor productivity of the designers and the industrial engineers increased by 0.5 percent for the association as a whole, it increased by 54 percent in the brigades. The average monthly earnings of one brigade member grew by 43 percent. During this, the additional payment from the brigade's additional earnings was 41 percent of the official pay rate. The labor and creative activity of the workers increased: Obsolete norms for individual types of operations were reviewed based on the initiative of the brigade members and "severer" ones were adopted. The microclimate in the collective improved noticeably, and personnel turnover decreased sharply.

The new form for organizing and paying for labor was incorporated in the Dneprogiproshakht Design Institute at the end of 1981. The practices of employing it correspond almost completely to the Ulyanovsk method. However, there are also several differences. Specifically, composite brigades have been established in the institute from representatives of the different departments and services. Compared with the Ulyanovsk Leading Special Design Bureau for Heavy and Milling Machines, the rights of the brigade leader have been considerably expanded here. He has the right to increase or decrease the additional earnings of brigade members by up to 25 percent depending on their individual contribution.

The following goal has been posed to the brigades in the institute: not only to improve the quality of the designs and decrease the design periods but also to achieve a very rapid transmission of the designs to the requestors (consumers) in the stipulated format. Close cooperation with the requestor and the future consumer during the designing process has been adopted as a rule here, and disagreements are being effectively eliminated. This permits the procedure for a design's coordination and approval to be significantly speeded up when the work on it is finished.

The wide-spread use of standard designs, the development of innovations and inventions among designers, and the clear-cut interaction of all of the institute's departments and services during the fulfillment of the brigade's task lead to an increase in the quality of the designing and to a decrease in its period. The fact that 15 percent of the saved wage fund (the brigade's additional earnings) is directed toward encouraging workers in the different departments, who are performing single tasks or contributing a better organization of their work, also contributes to the brigade's successful work.

During the first year of working under the brigade method, the designing periods have already been curtailed by three months on the average and all designs have received an "excellent" rating during their approval. Whereas previously no less than two years were spent on developing and approving a design, it is now only a year. The labor productivity of the designers has grown by almost 20 percent and their average salary by 15 percent. The size of the additional bonus payments after the handing over of the designs varied from 40 to 300 rubles depending on the specific work contribution of each brigade member.

Despite the positive experience in using the brigade contract in design organizations, it has still not received widespread dissemination. Practice has shown that a careful technical, organizational and economic preparation for shifting to the new form and a reorganization of the planning and incentive system and the social and psychological climate in the collective determine the success. However, they have still not carried out such a reorganization in design organizations.

In our opinion, the main obstacle lies in the failure to solve the problem of materially encouraging designers under the new conditions. There are still no clear methodological instructions (legal basis) that permit the savings in the wage fund to be used to encourage the work of the members of these brigades. True, the USSR State Committee for Labor and Social Problems and the AUCCTU Secretariat have approved a new system for wages -- but only for conducting the experiment in the Ulyanovsk Leading Special Design Bureau for Heavy and Milling Machines. This circumstance is hindering the incorporation of the progressive form in many design organizations.

At the same time, the party and government decree entitled "On Measures to Accelerate Scientific and Technical Progress in the National Economy" has directly recommended that ministries and departments take economic and moral steps to interest all participants in the building and incorporation of equipment and technologies into production during their modernization.

The existing norm-setting practices for workers' labor and the existing norm base are lagging behind the requirements that the brigade organization for work imposes. Experience has shown that the activity of design brigades is effective only when there are the appropriate norms -- consolidated time norms that take the novelty and complexity of the design work into consideration.

The problem of rationally loading costaccounting brigades with work arises in connection with the fact that they are mastering a significantly larger volume of work than has been provided for by the plan. In order to solve it, it has been specifically proposed to use part of the workers to fulfill contract work with other organizations.

The deficiencies are also interfering in planning. For example, orders for the brigades are not always compiled in a timely and qualitative manner. There is much that is unclear in the structure of the intraorganizational calculations and their indicators. It is still not being orientated directly on the brigades. The relationship between the volume of design work, the wage fund and the number of workers is not sufficiently valid.

Clear criteria, which define the quality of the performed work and the responsibility of the executors for it, are lacking. The system for evaluating the results of the brigades' work needs improvement. With its help, the effectiveness of this progressive form for organizing and stimulating work can be calculated. Special difficulties arise in cases where brigades are solving social problems.

The procedure for drawing up and approving documents for the design work is unnecessarily complicated and does not contribute to a very rapid introduction of the new items into production.

Generally speaking, the experience, which has been accumulated from the work of designer brigades that are working according to a common order with payment for final work results, is evidence of the sweeping capabilities for increasing the effectiveness of the work of this category of workers under the conditions of the continuously accelerating scientific and technical progress and the transition of science to an intensive path of development. These capabilities will be used more fully if, having made a good study of the experiences in using the brigade form for organizing and paying for work based on final results in the country's design organizations and taking into account the experiment that has been conducted in five Leningrad production associations, common inter-branch methodological recommendations are developed, which would provide for solving the above-mentioned problems and which would contribute to the wide-spread use of the new progressive form for organizing and stimulating the work of designers.

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LABOR

ROLE OF LABOR COLLECTIVES IN ECONOMIC PLANNING EXPLAINED

Moscow TRUD in Russian 16 Mar 85 p 2

[Editorial: "The Collective and the Plan"]

[Text] Today the main efforts of the labor collectives are directed at insuring a big finish for the 11th Five-Year Plan. Plans for economic and social development in the next five-year plan and in 1986 are being drawn up simultaneously throughout the entire country. The collectives of the brigades, sections, shops, departments, enterprises, associations and trade union organs are participating in this work together with workers of the planning departments of the enterprises and associations, the economic planning administrations of the ministries, and the republic and union state planning committees.

The authors of letters to the editor have asked for an explanation of the significance and order of planning from below, and to describe participation in this planning and the powers of the trade union committees. This is the topic of today's economic consultation by TRUD.

Article 6 of the Law on Labor Collectives documents the right of workers to participate in developing and discussing drafts of long-range and current plans for economic and social development of their enterprise, institution or organization. Draft plans that are weighed, thought out and thoroughly justified in the labor collectives are extremely necessary because they provide an impression of the possibilities of the enterprises, which are constantly growing, and about reserves not yet utilized. Of course, our planning is centralized. The drafts that are proposed frequently experience rather serious changes in higher economic and planning organs: After all, state interests must be accounted for and all of the necessary balances within the sector and between sectors must be observed. But the foundation of such plans always remains constant. Participation of the labor collectives in planning is precisely what guarantees that the programs are challenging and realistic.

Complying with requirements of the Law on Labor Collectives, recently the USSR Gosplan and AUCCTU approved the "Interim Recommendations on Participation

of the Labor Collective in Developing and Discussing Draft Plans for Economic and Social Development of the Production Association, Enterprise and Organization." These recommendations describe the specific procedures that are always applied.

Take for example the present phase of discussion of the control figures for the 12th Five-Year Plan, which also came into being on the basis of proposals from below. These figures have already been returned from the USSR Gosplan via the ministry, the main administrations or industrial associations to the enterprises for thorough analysis and for additions and corrections.

But what is the work procedure? First of all the labor collective must foresee the demands of its consumers and have a clear idea of the orders that will be submitted in the future.

It must be emphasized that production volume should be increased only as necessary. For example the Moscow Electrical Plant imeni V. V. Kuybyshev sends written notices to consumers asking them to update their needs and express their terms and wishes for the following year and in the long range. All supply details are also discussed thoroughly with clients at the Kaluga Turbine Plant. This is a guarantee that articles will be produced in excess of the plan only when this is truly necessary. The turbine builders also look for good reasons before finishing their products ahead of schedule. What reason would there be to break the records if later on the article is going to be lingering in the client's warehouse because the particular facility is not yet ready for its installation?

Note also that the draft plan must be written with regard for the enterprise's long-term business ties and for intensive development of production on the basis of the accomplishments of science and technology.

After coordinating with the trade union committee, the enterprise administration must publish an order on the procedures and deadlines for drafting the five-year plan. This order must foresee participation of the laborers in planning in all of its basic stages. For example they must participate in the economic analysis of the previous five-year period and in determination of the objectives for the next five-year plan. They must participate in preparation of proposals and remarks concerning control figures, and in development of different variants of the draft plan's sections. Measures in which they must mandatorily participate also include comprehensive justification of the proposed indicators in the draft and, finally, public discussion of the document.

Of course, in order to solve all of these problems the essence of the objectives reflected in the control figures and the need for revealing production reserves must be brought to the awareness of every collective member.

Together with public organizations the administration must initiate explanatory work in the collectives, brigades, sections and shops. Workers' meetings, permanent production conferences, social creative organizations

and primary organizations for scientific organization of labor and of the All-Union Society of Inventors and Efficiency Experts, reviews of economization of material and labor resources and special specific-purpose creative brigades tackling the most complex technical problems of production development must be utilized in this effort. Of course, active utilization of large-circulation newspapers, plant radio broadcasting systems and visual agitation must be foreseen in this work.

In order to collect data for the draft of the plan section titled "Social Development of the Collective" the administration could organize sociological research at the enterprise jointly with the trade union committee.

All draft plans are written on the basis of an analysis of proposals by laborers and the control figures. These drafts are started in the brigades, sections and shops, and then they are subsequently used as a basis for drawing up the plan for the enterprise as a whole.

Surpassing the control figures for indicators characterizing work effectiveness and quality is an indication of correct work on the draft plan. These indicators include growth in labor productivity, reduction of product cost, growth in the proportion of articles in the top quality category, economization of resources and so on. Growth in production of scarce products foreseen by the collective is another such indicator. Such growth is especially desirable in operations producing consumer goods as well as articles and products supporting the Food Program.

Production volume must be increased by making better use of internal reserves and as a rule without allocating additional material resources and capital investments.

After being rewritten with regard for the proposals of the laborers and public organizations, the draft five-year plan must then be examined at a meeting of the trade union committee. The justifications and the organizational-technical support available to all indicators must be meticulously verified at this time.

Next the draft plan for economic and social development must be discussed at a meeting of the labor collective. If because of peculiarities in the work schedule and territorial isolation of subdivisions it is difficult to conduct a general meeting, a conference may be convened. The enterprise director must give a report on the draft counterplan.

An important detail should be emphasized: The minutes of the meeting (conference) are sent to higher economic and trade union organs together with the draft plan. The draft must not be accepted without these minutes.

A reverse relationship is foreseen as well. Having examined the proposals of the collective, higher organs are required to report their decision to the enterprise.

Now a few words about drawing up draft annual plans. The basis of the work in this case is the quotas and economic standards of the five-year plan, the updated demand of the national economy and the public for the enterprise's products in the planning year, and the obligations incurred in long-range contracts and agreements. The procedures followed in preparing and discussing the draft annual plan do no differ from those presented above.

Now let us assume that the enterprise has received an approved plan. The trade union committee must make sure that the planning quotas are brought to the awareness of the subdivisions and work stations promptly. This is very important to organizing effective socialist competition, to mobilizing the laborers to fulfill and surpass the approved plans, and to drawing up personal and brigade pledges, creative plans of engineers and technicians, integrated plans for raising labor productivity, personal economization records and so on.

The enterprise and shop trade union committees must monitor the progress in fulfilling each indicator of the plan and item of the collective contract, and they are obligated to regularly entertain the appropriate reports from the administration and make decisions aimed at raising the rhythmicity of the work of the subdivision, section and brigade.

USSR ministries and departments and the councils of ministers of the union republics must take the necessary steps jointly with central committees and with republic and oblast (kray) trade union councils to implement the provisions of Article 6 of the Law on Labor Collectives foreseeing participation of laborers in the development and discussion of draft long-range and current plans for economic and social development. It must be emphasized that the drafts of these plans are subject to approval only after they are discussed by the labor collectives.

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CSO: 1828/133

LABOR

CONCERN RAISED FOR AGING WORK FORCE IN UKRAINIAN SSR

Moscow PRAVDA in Russian 21 Mar 85 p 2

/Article by A. Luk'yanenko, Ukrainian SSR Minister of Social Security, Kiev:  
"They Remain at Their Jobs"/

/Text/ We respectfully pronounce the words a "deserved rest." Nevertheless, by no means everyone that has reached the pension age is in a hurry to take advantage of the right to leave his job and to entirely switch over to social security. Many of those whose work fitness is restricted by health or age do not break off their ties with socially useful labor. Without an exaggeration it can be said that this is a matter of state importance. A fundamental solution of the problem is possible only under socialism, when state policy is subordinate to humanistic ideals.

It is well known that there is no better doctor than an active way of life. Labor within one's powers increases life's tone and lifts one's mood and spirits. It is also difficult to overestimate the economic aspect of the problem. The demographic situation in the Ukraine, as in a number of other regions in the country, is not easy. A significant increase in labor resources is not expected in the very near future. The further "aging" of the population will continue. Meanwhile, the number of pensioners in the country is on the rise right now. A wide participation of veterans in public production is becoming an urgent task.

This problem has several facets. Of course, it is very important to further intensify work on the prevention of diseases which lead to temporary and even prolonged disability.

Much attention is paid to labor protection in our republic. Heavy and harmful production processes are being mechanized and automated and technology is being improved at enterprises. Naturally, technical innovations in themselves do not solve all the problems connected with an improvement in working conditions. An overall approach is needed here. It is necessary to take into consideration production and therapeutic-sanitary factors. That is why the 'Zdorov'ye /Health/ Program is actively implemented at such large enterprises as Zaporozhstal' and Dneprospetsstal', the Nizhne-dneprovskiy Tube Rolling

Plant, the Zhdanov Metallurgical Combine imeni Il'ich and others. What determines its efficiency? Let us take, for example, retirement due to disability. This indicator has dropped significantly in the Ukraine during the years of the present five-year plan. With regard to the mentioned enterprises, the number of those that have been forced to leave their jobs on account of their state of health is lower here than, on the average, in the republic.

Thus, the measures envisaged by the Zdorov'ye Program give visible results. However, by no means everything gladdens us in the organization of this matter. The lack of an individual approach is the main shortcoming. New organizational forms are needed for this. In particular, it is a matter of medical-engineering brigades. More than 300 have already been established at metallurgical industry enterprises in the Ukraine. These brigades include specialists in different fields. They check whether work places meet existing requirements and whether the conditions necessary for safe, healthful and highly productive labor have been ensured. At the same time, they analyze the results of dispensary examinations of workers, the recursability of occupational diseases and their causes. Then commissions give recommendations.

The implementation of the mentioned and a number of other measures is aimed at the solution of one of the fundamental problems facing public health and social security organs--to attain an early medical and social prevention of disability. We are for a medical labor expert examination that does not establish the loss of work fitness, but prevents it. Here it is often necessary to overcome inertia and formed habits.

For example, in accordance with the procedure established by the standard documents of the AUCCTU and the USSR Ministry of Health a worker, who has been sick for more than 4 months, can be officially declared disabled. However, is this always efficient? Practice established in our republic demonstrates that in many cases it is advisable to extend temporary disability certificates, carrying out an active medical and social-labor rehabilitation.

In the Ukraine during the current five-year plan, instead of being transferred to disability, more than one-third of the individuals initially examined by medical-labor expert commissions have been annually sent for after-care. The overwhelming majority of them have returned to work. Especially high results have been obtained during the after-care of injuries to the locomotor system and diseases of digestive and circulatory systems--seven to nine out of ten people. There is a big social effect behind these figures. In my opinion, changes must be introduced into the existing instruction on the permissible periods of extension of medical certificates.

We must especially discuss those that receive the right to a deserved rest and social security on account of age.

It is well known that Soviet pensioners are among the "youngest" in the world. In our country pensions are granted earlier than in capitalist countries. Therefore, many veterans can continue to work actively. Sociological research conducted by social security organs has shown that it is better to begin the formation of directions toward the continuation of labor activity as early as the prepension age. The effect is especially high if people are invited to remain at the same enterprises and, as a rule, at their usual work places.

More than 60 percent of the people that have reached the pension age have remained to work in the republic in recent years. Up to 85 percent of the production workers, who have earned the right to rest, but wish to continue working, annually remain at their work places at many coal, metallurgical and machine building industry enterprises noted for the stability of their personnel.

The regime of an incomplete work day and of types of jobs done at home is also justified for pensioners.

The recently held all-Union conference on problems of pensioners' labor and way of life raised many problems requiring an urgent solution. In particular, it is necessary to increase the interest of enterprises in the utilization of pensioners' labor and to adopt legislative acts regulating the operation of specialized shops and sections, as well as the labor of people working at home and people with an incomplete work day.

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EDUCATION

MOSCOW GORKOM SECRETARY BORISOV ON QUALITY OF LABOR TRAINING

Moscow SHKOLA I PROIZVODSTVO in Russian No 4, Apr 85 pp 6-9

[Article by L. A. Borisov, secretary of the Moscow City Committee of the CPSU, under rubric "Conference of Managers of the Capital's Base Enterprises": "Applying Joint Efforts to Improve the Training of Students for Labor"]

[Text] On 17 January 1985 the Moscow City Committee of the CPSU conducted a conference of the managers of the base enterprises of the [general-educational] schools and vocational-and-technical schools. The conference was opened by Secretary of MGK KPSS [CPSU Moscow City Committee] A. M. Roganov.

A report entitled "The Tasks of the Labor Collectives of the Base Enterprises in Improving the Organization of Labor Training and the Socially Beneficial, Productive Labor of the Students in [General-Educational] Schools and PTU [vocational-and-technical schools] in the Light of the Decree of the April 1984 Plenum of the CPSU Central Committee, Entitled 'The Basic Directions in the Reform of the General Educational and Vocational School System'" was given at the conference by CPSU Moscow City Committee Secretary L. A. Borisov.

In statements made by conference participants First Secretary of the Zelenogradskiy Rayon Committee of the CPSU A. M. Larionov, General Director of The Salyut Garment Production Association N. Ye. Pokorskaya, AZLK [ Moscow Labor Red Banner Automobile Plant imeni Leninskiy Komsomol] Party Committee secretary V. F. Babkin, and others, a large amount of attention was devoted to throwing light upon the accumulated experience in the close interaction among the base enterprises and schools in creating the conditions for the successful organizing of labor instruction, indoctrination, and vocational guidance of the students, and in ascertaining the reasons for the existing shortcomings and locating measures to guarantee the further improvement of the training of the younger generation for labor.

Participants in the conference included: USSR Minister of Education S. G. Shcherbakov; RSFSR Minister of Education G. P. Veselov; section chief, CPSU Central Committee Department of Science and Scientific Institutions V. V. Mareyev; Deputy Chairman of the Mossovet [Moscow Soviet] Executive Committee V. A. Koroleva; First Deputy Chairman of USSR State Committee for Vocational and Technical Education V. I. Konkin; First Deputy Chairman of RSFSR State Committee for Vocational and Technical Education P. P. Afanas'yev; and responsible workers of CPSU Moscow City Committee, Moscow City Committee of the Komsomol, and a number of ministries and departments.

The following is an article by L. A. Borisov, which was prepared by the author on the basis of his report.

The school reform is a statewide, nationwide matter that is of great political, socioeconomic, and ideological importance. The realization of its noble ideas is the concern not only of the pedagogical collectives and the agencies of public and vocational-and-technical education, but also of all the party, Soviet, trade-union, and Komsomol organizations and the labor collectives. In the Basic Directions for the Reform of the School System it is emphasized, "For every labor collective, every manager of an enterprise, kolkhoz, institution, ministry or department, or public organization, the matter of the school system must become their own heartfelt matter."

The CPSU Central Committee views the improvement of the labor training of young people as the pivotal idea in the reform, and a task of primary economic, social, and moral significance. Under conditions when all the branches of our country's national economy are moving ahead to the most advanced goals in science and technology, there is broad automation of production, and a cardinal increase in the labor productivity, it is required of every young person entering independent life that he have not only a well-rounded general education, but also a thorough knowledge of the scientific-technical and economic fundamentals of production, good vocational training, and a conscious, creative attitude toward labor. The present organization of labor indoctrination and instruction, the April 1984 Plenum of the CPSU Central Committee emphasized, does not yet correspond to these requirements.

Among the major measures that have been planned by the joint decree of the bureau of the CPSU Moscow City Committee and the Mossovet executive committee in implementing the reform of the school system in the capital, a special place has been assigned to the decisive improvement of the labor training of the students in general-educational and vocational-and-technical schools, and to the developing in them of an awareness of the need to work for the common good.

In Moscow rich experience has been accumulated in the participation of production in the labor training of students. More than a thousand enterprises and organizations cooperate with the general-educational and vocational-and-technical schools. Many of them have made a large contribution

to the creation of interschool production-training centers for the labor instruction of the students in the upper grades. In the currently existing 44 centers, 900 training schools and labs have been set up as structural subdivisions of enterprises. Twenty-two training shops have been created at production sites themselves. Students in the upper grades work at almost 1200 enterprises during the period of practical production work and the summertime labor quarter. All this has made it possible to involve the overwhelming majority of them in the mastery of the principles of the mass occupations and in their regular participation in socially beneficial, productive labor, and to bring them closer to the needs of production.

An example of the skillful organization of this close cooperation can be provided by the interaction between the First State Bearing Plant and Production-Training Center No. 2 in the capital's Zhdanovskiy Rayon. That center was created as a plant shop with all the resultant rules and obligations. From among the experienced plant specialists, 25 foremen were selected; they organize the students' instructional and production labor skillfully. The enterprise has carefully set up various sectors -- lathe, fitting, carpentry, culinary, etc. -- on the basis of which the students, beginning with grade 7, learn occupations and manufacture useful output in 35 different types. The students in grade 10 work at the plant itself.

A large amount of work in the labor instruction and vocational guidance of schoolchildren at the production-training centers is carried out by such base enterprises as ZIL [Moscow Automobile Plant imeni Likhachev], AZLK, the woodworking machine-tools plant and automatic-lines plant, Motor Vehicle Repair Plant No. 6, Machine Plant No. 2, the Pioneer Garments Factory, and many others.

During recent years, on the initiative of economic managers and party organizations at the enterprises, new effective forms have arisen in the work of providing the labor training of the students. For example, several years ago the Khromatron Plant, jointly with School No. 370, Kuybyshevskiy Rayon, organized classes with increased labor training of students in the upper grades at the production sites themselves. The students master one of the occupations of their choice under the guidance of experienced production experts, participate actively in the labor and social-and-political life of the labor collective, have permanent work permits, and receive free meals. In 1984, 40 percent of the graduates of those grades stayed behind as workers at the plant.

Increased labor training for the students of a number of schools has been similarly organized on the basis of the Plant imeni Likhachev, the Leninskiy Komsomol Plant, the Prozhektornyy [Searchlight] Plant, and the Lianozovskiy Electrical-Machinery Plant. The experience of the joint operation of these enterprises and schools has been approved by the bureau of the CPSU Moscow City Committee.

The experience of the Chayka School Plant in Moscow is widely known throughout the country. At that plant, for more than 20 years, more than 4000 adolescents have been engaged in producing miniature electric motors, the Mal'chish radio receiver, articles of clothing, and printed matter, have been

receiving their initial training in a number of occupations linked with this work, and have been participating actively in the administration of production and in efficiency-improvement and invention work.

At the present time the question of creation several additional school plants of this type is being worked out.

Many enterprises render a large amount of assistance to the schools in reinforcing the material base for the labor instruction in the students in grades 1 through 8, in creating instructional and production-training shops, and involving the students there in socially beneficial, productive labor. For example, at School No. 399, the base enterprise set up a production shop with a machine sector, fitting sector, and carpentry sector. Under the guidance of the foreman and a technologist from the enterprise, all the students in grades 4 through 8 work there, annually producing, in response to production orders, approximately 300,000 parts of 37 different types.

The First Moscow Clockworks Plant, Zhdanovskiy Rayon, organized a similar shop at the production site itself. On the basis of a contract, 250 students in the sponsored School No. 622 are working there. In Kalininskiy Rayon, the efforts of the enterprises (Manometr Plant, Garment Factory No. 13, Experimental Factory imeni Klara Tsetkin, and others) created interschool production-training shops where the students in grades 4 through 8 of a number of schools undergo labor instruction and fulfill production orders for the enterprises.

There are many similar examples in Moscow. I would like to mention the Machine-Tool Building Plant imeni Ordzhonikidze; the Salyut Garment Production Association; the Krugozor Toy Plant; the Frunzenskiy Rayon Repair and Construction Administration; etc., which are carrying out a large amount of work in the labor indoctrination and instruction of schoolchildren. Almost 60 percent of the students in the middle classes have been involved during this school year in various forms of socially beneficial, productive labor.

In conformity with the principles stated by the April 1984 Plenum of the CPSU Central Committee and the 1st Session of the USSR Supreme Soviet, 11th Convocation, the buro of the CPSU Moscow City Committee and the Mossoviet Executive Committee, by their decree, assigned permanently to the schools and UPK [production-training centers as base enterprises approximately 1000 enterprises and organizations whose economic managers and party, trade-union, and Komsomol organizations have been assigned the responsibility, jointly with the pedagogical collectives and the public education agencies, of developing long-range plans and taking specific steps to improve the labor training and vocational guidance for the students, of organizing their socially beneficial, productive labor, and creating favorable conditions for that.

One of the most important and fundamentally new tasks which, in conformity with the reform of the school system, will have to be resolved by the base enterprises, jointly with the pedagogical collectives, is the organizing of a system whereby the students in the upper classes acquire the mass occupations. By decree of the buro of the CPSU Moscow City Committee, a deadline has been set for the completion of the changeover to the vocational training of the

students in the upper classes -- by the beginning of the 1987-1988 school year. In order to carry out this task we shall have to do a very great deal of work.

For the time being, only half the graduates of the schools are passing qualifying exams in the occupations being studied by them. Last year slightly more than half of those who had begun working immediately after graduation from secondary school took production jobs. All this is the consequence of serious areas of insufficient work done by the pedagogical collectives, the public education agencies, and the base enterprises. Moreover, some of the that have been permanently assigned as production-training centers, which are currently the basic link in the vocational training of the students in the upper classes, have lessened their attention to this work, and have been doing little to organize the activity of their structural subdivisions at the UPK. For example, the Mossel'mash Plant, for a period of five years, has been the base enterprise for the lathe shop of the Zheleznodorozhnyy Rayon UPK. However, at that shop the obsolete equipment and the machine tools frequently go out of commission, but the enterprise does not repair them, has not yet assigned a production-training foreman, and fails to provide the shop with production orders for the purpose of organizing productive labor.

At a number of enterprises (the Ochakov Dairy Plant, etc.) there have been serious shortcomings in the organization of production-training practical work for students in the upper classes. They are being used chiefly in subsidiary operations, and their knowledge of the occupation being studied is not being reinforced. It happens that for a large part of their time the students simply observe how the adults are working. The public nutrition enterprises are engaging insufficiently in organizing practical work for the students in the upper classes.

One can frequently hear complaints that a small number of young people are going to work at construction sites. However, many construction organizations and certain enterprises in the city are carrying out practically no work to provide vocational guidance to the students that directs them toward the construction-worker occupations. Only ten rayons have organized the appropriate vocational training of the students, which encompasses only 3 percent of the students in the upper classes.

Yet, experience in the successful resolution of this task has been accumulated. Take, for example, Machine Plant No. 2 of Glavmospromstroymaterialy, which actively cooperates with 11 schools. The management and the party organization at the enterprise, jointly with the pedagogical collectives, developed and consistently carries out measures aimed at developing in the students an active interest in the occupations needed by the construction industry and at involving them in productive labor. A list of specific articles that the schoolchildren are capable of producing has been defined, contracts have been concluded with the schools, and instructional shops have been re-equipped and converted into structural subdivisions of the plant. As a result, during the current school year it was possible to involve in regular productive labor 2500 students, who during the first four months of this year alone manufactured 406,000 different articles.

The managers of the base enterprises and organizations, jointly with the public education agencies and the collectives at the production-training centers and schools, have been instructed to think out carefully all the questions that are linked with the organizing of the labor and vocational training of the students in the upper classes. We have in mind not only the providing of the proper material base for this, primarily the providing of the high-quality outfitting of the existing training shops and sectors at the enterprises, the creation of new ones, and the allocation of a sufficient number of work sites for the practical production work of the students in the occupations being studied, but also the organizing of their labor training itself in such a way that, as the students acquire their occupational skills, they simultaneously acquire sufficient knowledge of the principles and economics of production, become acquainted with progressive forms of the organization of labor, participate in socialist competition, communicate more with the workers, and, to use a figurative expression, really get immersed in the worker's stewpot. It is important also to see that the persons working with the schoolchildren are persons who are actually capable of giving them good vocational training and of instilling in them an interest in and love of the occupation being studied. It is necessary at such time to take an especially attentive and circumspect approach to the organizing of the socially beneficial, productive labor of the students.

We persistently explain to the economic managers that the participation of production in the labor and vocational training of the schoolchildren directly influences the degree of interest that they have in the worker occupations and in the base enterprise, and, in the final analysis, also influences the influx of young people into the city's national economy. But one should also not forget that the schools must provide better for preparing -- psychologically and organizationally -- their students for labor under production conditions.

A large amount of work will have to be carried out by the pedagogical collectives, the public education agencies, and the base enterprises in the capital for the successful resolution of the task posed by the CPSU Central Committee -- the task of achieving the further improvement of the labor indoctrination of the students in the incomplete secondary school. The implementation of that task, as has already been mentioned, has been begun in the capital, but not from ground zero. All the rayons have had experience in attracting younger schoolchildren and teenagers to labor involving self-service work, the repair of teaching equipment and teaching aids, the landscaping and beautification of adjacent territories, and the manufacture of various articles in accordance with work orders submitted by the management of the schools, kindergartens, and base enterprises. However, it will be necessary now to make the socially beneficial, productive labor performed by the students of these ages more systematic and universal, and there are more than 700,000 of them in Moscow. This kind of task has been assigned to us for the first time, and its successful implementation will require the maximum mobilization of efforts.

The schools have been given the assignment, jointly with the base enterprises, of developing a long-range plan for involving all the students in systematic socially beneficial, productive labor, by providing for the additional equipping of the existing training shops, the creation of new ones, including

by means of adding on additional structures, as well as the allocation and equipping of special areas at the enterprises.

We must show special concern for the effective organization of the labor instruction, indoctrination, and productive labor of the students at boarding schools and children's homes. It will be necessary at the very first stage in the carrying out of the school reform to create the necessary base for this purpose.

When organizing the productive labor of schoolchildren, careful attention was devoted to the creation of its healthful and safe conditions. Questions of the observance of work-safety measures and the requirements of sanitation and hygiene must be constantly under the personal supervision of the managers of the enterprises, organizations, and schools.

In conformity with the Statute Governing the Base Enterprise of the General Educational School System, the labor collectives have been called upon to carry out in a broader and more purposeful manner the work of providing vocational guidance for the students, directing them toward the worker occupations, primarily to those for which the base enterprises have a need. For the time being, only individual enterprises have their own vocational-guidance offices. The vocational-guidance offices at the schools still have only a small number of materials dealing with Moscow's vocational-and-technical schools or the mass worker occupations, and the graduates are poorly informed about the needs of the city's national economy for manpower or about the working and everyday living conditions of the labor collectives. That means that it is necessary to resolve decisively the organization of vocational guidance, to guarantee broad explanatory work with the schoolchildren and their parents with regard to questions linked with the choice of an occupation and the finding of a job and to conduct regular production trips, to organize the familiarization of the school workers and the students with modern technology, technological schemes, and the economics and organization of labor at the base and other enterprises.

We would like to dwell also on one problem that is linked in the closest manner with improving the quality of the education and labor training of young people. Present-day production makes new demands on the workers' level of technical efficiency. There has been a steady increase in the influx of the latest technology and electronic computers into all branches of the national economy. This poses the task of organizing the instruction everywhere -- and in the near future this will also be mandatory instruction -- of all the workers and specialists in the use of computers.

The Basic Directions for the reform stipulate the instruction of the students at general-educational and vocational-and-technical schools in the principles of computer technology. This year an instructional course of this type has been introduced at all the PTU. Fifteen interschool production-training centers are carrying out the training of the students in the upper grades in specialities that are linked with work on computers and with the servicing of them. In 12 schools electronic computers and microprocessor technology are being introduced into the instructional process on an experimental basis. All

this work is being carried out with the most active participation of the base enterprises, the institutions of higher learning, and the scientific institutions, which have allocated the required equipment and specialists.

However, the instruction of the students in how to handle electronic computers and microprocessor technology must be given a considerably broader nature. There are opportunities for doing this in Moscow. Many base enterprises and organizations have at their disposal computer technology and cadres of experienced specialists. The primary task is the creation at the UPK and vocational-and-technical schools of electronic computer offices, as well as similar interschool offices, and the involvement of specialists for developing the programs and instructing the teachers in how to work with computers.

It is well known that the basic form for the planned training of qualified worker cadres for the national economy is the vocational-and-technical educational system. In the capital, constant attention is devoted to improving the activity of the vocational-and-technical schools. Eighty percent of the future young workers are currently learning their occupations there.

In conformity with the reform, all these schools in the city have been reorganized into a single type -- the "secondary vocational-and-technical school." The training of young workers is being carried out with a consideration of the requirements of scientific-technical progress. Sixty percent of the vocational-and-technical schools are training workers with a broad range of specialization. The instruction of qualified workers who have mastered a second occupation has increased by a factor of 2.5 as compared with 1982. Twenty-five schools have begun instructing students in occupations linked with the creation and operation of new technology, automated production entities with the use of computers, robots, microprocessors, and flexible technological schemes. There has been a considerable increase in the concern for the vocational-and-technical schools on the part of many of the base enterprises, and the ties that the PTU have with the schools and the production-training centers are becoming stronger.

However, the city's vocational-and-technical educational system still has serious shortcomings. A number of schools, especially those belonging to RSFSR Ministry of Light Industry and Ministry of Textile Industry, have failed to create the conditions for training skilled workers. There is a shortage of training offices and production shops; every third milling machine, and almost every fifth turning lathe, has been operated for more than 20 years; and there is a high turnover rate for foremen. CPSU Moscow City Committee has required the managers of the base enterprises to intensify their attention to organizing the training of cadres in the vocational-and-technical schools.

The reorganization that has begun in the labor indoctrination, instruction, and vocational guidance of the students makes increased demands on the administration of that process on the part of the agencies in the field of public and vocational-and-technical education. The main administrations, rayon administrations and departments, and the managers and party organizations of the general-educational and vocational-and-technical schools must show more initiative and persistence in reinforcing the cooperation

between the educational institutions and the enterprises, and in assuring the more complete generalization of the experience of their joint work in the labor training of the students. It will be necessary to organize the regular training of production personnel who have been assigned to instructing the schools and guiding their labor, and to render more methodological assistance to them.

The decisive figures in carrying out the reform are the teacher and the production-training expert. Their daily purposeful work determines the development in the students of their attitude toward labor as being the absolutely first need in life, their interest in and love of the worker occupations and production, and the instilling in them of a responsible attitude toward the execution of the work orders issued by the enterprises, the intactness of the equipment and the cutting tools, the observance of labor discipline, and the economical expenditure of materials and electric energy. The city committee concentrates in these areas the attention of the party's rayon committees and the party organizations at the schools.

The successful resolution of the tasks posed by the CPSU Central Committee with regard to the fundamental improvement of the training of students at general-educational and vocational-and-technical schools for labor is determined, to a considerable degree, by the organizing work of the party and Soviet agencies. At the present time, when the first steps have been taken to carry out this very important task of school reform, it is necessary to analyze carefully the plans for the further improvement of the joint activity in this direction by the general-educational and vocational-and-technical schools and the base enterprises, to listen regularly to oral reports concerning the fulfillment of what was planned, to be concerned about assuring that the attention of the collectives at the enterprises, institutions, and organizations engaged in production to meet everyday needs in the city and in the rayons, and at the public health agencies, is constantly drawn to the resolution of the tasks of improving the labor activity of the younger generation and to organizing their socially beneficial, productive labor.

Guided by the decree of the April 1984 Plenum of the CPSU Central Committee, the party's city committee is carrying out consistent work to guarantee the coordinated actions of the party, Soviet, economic, trade-union, and Komsomol agencies, schools, and labor collectives in the capital in the successful carrying out of the school reform.

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EDUCATION

GROWTH, PROBLEMS OF COMPUTER REVOLUTION IN SCHOOLS DISCUSSED

Moscow PROFESSIONAL'NO-TEKHNICHESKOYE OBRAZOVANIYE in Russian No 3, Mar 85  
pp 2-6

[Dialogue between Andrey Petrovich Yershov, department chief at the Computer Center of the Siberian Branch of the Academy of Sciences USSR, and Vladimir Vasil'yevich Temnik, director of the Moscow Vocational and Technical School-47: "The Computer"]

[Text] Electronic calculating machines, computers, calculating equipment—these words which were formerly known only to specialists are becoming more and more a part of our conversation. The fields of information and programming are gaining increasingly solid positions in our life. A division of information has been opened in the Academy of Sciences USSR. The department chief of the Computer Center of the Siberian Branch of the Academy of Sciences USSR and the world renowned theoretician of programming Andrey Petrovich Yershov has become one of the leading academicians in this field. Still another confirmation of the onset of the "epoch of programming" is the introduction of a special course in the country's vocational and technical schools (PTU). This is a new field and, naturally, in working in it a large number of questions arise. Vladimir Vasil'yevich Temnik, the director of the Moscow PTU-47—is one of those who is seriously concerned about the success of the new course. And so, the dialogue is conducted by Academician A. P. Yershov and the school director V. V. Temnik.

Let's Be Realists

V. T. If several years ago I had been told that today I, as director, would be concerned with whether we have in our PTU microcalculators, microEVM (electronic calculators) and other computer equipment I probably would simply smile. Is this something for the director of a construction PTU to think about when our branch has not even solved the problem of a five-ten percent mechanization of manual labor, and our graduates sometimes only have a theoretical picture of what a plaster or a painting station is?.... But suddenly

the situation changed sharply. Computerization came to the PTU. All of us—the teachers and the pupils—have to master an amazing language—the language of computer equipment.

A. Ye. I cannot agree with you that this occurred so "suddenly...." I have in mind not the teaching process, but the real situation in the economy. Electronic computing machines and systems of automated production management, machine tools with programmed controls and processing centers—this is no longer a novelty. There is probably no branch of industry where in one way or another computers are not used. Computerization has come into our life and has become not merely a reality, but a customary reality: for some at their jobs, for others—in books and on television screens.

V. T. But it one thing to see an EVM on television and something completely different to see it in classrooms....

A. Ye. No doubt, there is a difference. Still in all, I think one has to speak not about the suddenness of the appearance of the microcomputer in the classroom, but about the extent to which you and I are ready for this. I have already had occasion to write in the press that the universal computer literacy of our student youth (pupils, PTU pupils, and students of VUZes and tekhnikums)—is a precondition for the reequipping of the USSR economy on the basis of computer equipment. The complexity of contemporary production, the abundance of information used, and the necessity for performing vast mathematical calculations—all of this is inconceivable without computerization.

Let us agree: at one time 20 to 30 men would build a house and the result would be not bad. Today, in order to erect a building it is necessary to have the efforts of 20 different organizations; these efforts have to be coordinated which would hardly be possible without computer equipment.

V. T. That is, the school has to prepare people who understand this and who are masters at least of the basics of programming....

A. Ye. Exactly. The reorganization of production (and it is taking place in recent years with increasing intensity) requires thousands upon thousands of qualified specialists for the creation and operation of new equipment and automated productions involving the use of computers, robots, microprocessing equipment, and flexible technologies (that is, those which lend themselves to reorganization). For in the foreseeable future practically every machine will have a built-in microprocessor, and every work place will be equipped with information-computation apparatus.

V. T. An alluring prospect.... But let us return, however, to today's PTU.

It would be pointless to deny that for the present we do not have even a minimum of computer equipment which could be used in the teaching process. In our PTU today there is only a dozen engineering microcalculators.

What will tomorrow bring? I do not undertake to answer this question, but today we, PTU directors, are concerned not only with how best to teach our youngsters programming, but also with where to get the equipment (displays, microcalculators, and others). Of course, each of us accomplishes this task in his own way: we establish contacts with trade, with our base enterprises.... But all of this, if you will excuse me, sometimes looks more like some kind of fuss and bother in the vicinity of science, although we are doing highly important and necessary work....

Something similar is taking place with the training of teachers. Today, for example, a teacher himself listens to a lecture, and tomorrow he explains to his pupils what a microcalculator is, why it is necessary, and how it is to be handled.

A. Ye. Of course, the optimal variant would be to reinforce the teaching process with a solid material base, with programs which have been tested in practice, and with splendidly trained teachers. But let us be realists: the development of technology (that is, of production, of the economy) has somewhat overtaken the training of professional cadres. And it is our common task to reduce this distance. It is not accidental that in the decree of the CPSU Central Committee and the USSR Council of Ministers it is recorded: "To organize in the senior classes of the general educational schools, vocational and technical schools, and specialized secondary educational institutions the study of the principles of electronic computer equipment in order to instill in the pupils the skills of using computers and to equip them with knowledge about the wide use of equipment in the economy."

Today, in my opinion, the problem is how to make this teaching maximally effective.

#### Programming—the Second Literacy

V. T. In that case I will talk about that which seems to me to be clearly lacking toady in both teachers and pupils: a conviction that the study of programming should be engaged in, and a faith in the reality of the application of this new knowledge in practice.

Our base trust is the "Mosotdelstroy-11." As I have already said it cannot yet be said that computerization has covered our entire branch of industry.

A quite strange situation arises. We teach the youngsters the ability to use, for example, microcalculators, while they, when they come to a construction project, most often have not even heard about any kind of automated system for the management of technical processes.

What is to be done here? For the youngsters finally begin to think that we taught them things which are completely unnecessary.

A. Ye. Let us be more clear about this. We are talking not about "what the youngsters think," but about what exists and should exist in reality. After

all, although certain pupils believe that higher mathematics will be of no use to them in the future, we nevertheless teach it.

I am sure that the task of the school and of the PTU is to train not narrow specialists, but broadly educated people who are capable of finding an application for their knowledge in the branch which they have chosen or will choose. We meet people who think in a contemporary manner and who understand that computerization is a process that is irreversible and that this means that it demands from each individual the appropriate training: both professional and psychological.

Programming is our second literacy. It is becoming the same kind of foundation of our practical activity as are physics and chemistry, mathematics and biology.

Moliere's hero, Monsieur Jourdan, was very surprised when he discovered that all of life spoke in prose, since he had not suspected this. Thanks to the appearance of computers and the arisal of computer science, or information science, mankind finds himself in the situation of Monsieur Jourdan, discovering with surprise that it lives in a world of programs.

Yes, we live in a world of programs and ourselves are constantly programming, without being conscious of this.

A person's daily life, especially in the city--this is activity in accordance with programs.

Practically the entire field of production relations is worked in accordance with programs.

Today thousands of occupations are changing their appearance. Millions of people--operators, adjusters, salespersons--controllers, installers, conveyor belt assemblers--are sitting down at fully reequipped work places at which computers are becoming their partners. And even if this electronic partner is reliable, there has to occur a profound psychological and cognitive remaking of people.

The illiterate medieval barons prided themselves on the fact that their counting and writing was done by secretaries.

Today people who have no idea of computers and programming are finding themselves in their place. I am sure that the time is not far off when professional programmers become systems analysts and systems programmers, and that everyone will know how to program, which is why I call it the second language.

And it should follow from this: there is no alternative to computerization. Consequently the question is elsewhere: how to perfect the process of mastering the second language.

V. T. To do that it is necessary first of all to eliminate the gap between theory and practice.

A. Ye. I agree. And this gap will become narrower the more quickly and the better that our youngsters who enter the PTU are trained in this area. That is, I am sure that the teaching of programming should begin as early as elementary school. It should become an important part of general educational training, and in the PTU the youngsters must already be given the opportunity to professionally apply the theory to practice.

How do I imagine this? I will talk briefly about certain characteristics of a draft plan for a school syllabus for a course entitled "Principles of Information Science and Computer Equipment" which, I think, will soon find a practical application.

It is calculated for a four-year period: the seventh through the tenth grades. Thus, in the seventh grade it is planned that there be a study of the principles of the operation of computer machines and microcalculator devices; in the eighth grade--an acquaintance with algorithms, algorithm notation, and types of algorithm processes. In the ninth and tenth grades--an acquaintance with the elements of computer mathematics, the language of programming, and the principles of the structure and operation of the basic elements of the electronic computer. The most important thing in this program is its aspect of general development. Our youngsters have to come from school to the PTU (as to production) with a definite stock of knowledge about computerization, and, most important, with an understanding of the fact that without computer equipment today an economy is simply inconceivable.

V. T. That is, we are talking about amending the syllabi and about the use in the process of teaching of the means of programming and of computer equipment?

A. Ye. That, strictly speaking, is the only way. But I want to submit the reminder: in computer equipment nothing can be learned abstractly. Otherwise, it will be like the study of astronomy in the schools. We can look at the sky at any minute, but....

V. T. And with us programming is for the time being like Latin....

A. Ye. In order for it not to be perceived as a dead language, it has to be solidly tied to practice. In the school this means laboratory work. And in the PTU (moreover, of any profile) the possibilities for the practical application of programming are even wider....

Let us take your construction PTU. At first microcalculators can be used for simple mathematical calculations. Let us assume that the youngsters are calculating how much paint, mortar, and wallpaper is required for the performance of a concrete job. This will already be some kind of elementary level of the engineering management of construction work.

Then the calculations can be made more complex. For what purpose? So that a taste for information-computer operations appears among the pupils.

A second advantage of the vocational and technical schools is their solid connection with their patron enterprise, with production. Of course, if the schools had their own computers, practice play programs, and developing models, this would substantially increase the interest of the youngsters in computers. But even today (with the lack of visual means of teaching) quite a lot can be done. Many PTU already have microcalculators, and in the schools the microelectronic computer "Agat" has appeared. During the 12th Five-Year Plan tens of thousands of microelectronic computers are to be sent into the system of education.

Finally, during the 12th and the subsequent Five-Year Plans it would be useful, I think, to create studios outfitted with computer equipment in the secondary schools and PTU. They will be used in order to achieve a universal computer literacy and to increase the effectiveness of the entire teaching process, the labor learning, and the vocational training of the youngsters.

V. T. As far as I know (I can cite my own experience and information taken from the press), the process of the computerization of teaching is increasingly gathering strength. Thus, in 30 vocational and technical schools in Leningrad and Leningrad Oblast a study of the principles of programming and computer equipment is now being conducted in the training of workers of the most diverse specialties. A similar experience exists in the Moscow PTU.

But, it seems to me, for now the scope is very modest.... Although, judging by your words, computerization is not only the most immediate future, but is already our today (at least, in certain branches of industry). And, for this reason, if we began our conversation with the question of whether we were not running ahead too fast in the computerization of the instruction of the pupils of the PTU, now I want to pose the question differently: are we not lagging?

A. Ye. A difficult question. And, honestly speaking, I am not prepared to answer it. I can only speak about that about which I am absolutely sure: we have to persistently struggle against an excessively literal understanding of the role of any kind of technical innovation in the life of man.

Yes, I believe that the appearance and development of microprocessor equipment (and I have already had occasion to speak about this in the press) is the most revolutionary technical innovation of the 20th century.

But this means at the same time that now, after the appearance of microprocessors, the question of whether computers should or should not be in our schools and PTU becomes scholastic. There are already computers in our schools and PTU, and their numbers will increase. For this reason, what is demanded from us is very active intellectual and organizational work in order to impart to this process a manageable and pedagogically motivated character.

On the other hand, I repeat, the mastery of programming and of computer equipment cannot be torn away from real production.

V. T. You mean base enterprises?

A. Ye. Yes. We are obliged to cultivate in children a professional interest in computers, making use for demonstration and propagandistic purposes of the material base of the PTU and of patron enterprises. Let them know what, for example, an information-computer center is, how a lathe machine tool with programmed controls operates, and how an operator of a machine tool with digital program controls differs from a lathe operator.

If such an acquaintance with production is organized intelligently, sensibly, and practically, the youngsters, of course, will see, for example, at a construction site, a mass of absurdities (today what was built yesterday is being broken up, today roads are being asphalted in order to hollow out this asphalt tomorrow; yes, we still have quite a bit of confusion and muddle-headedness). But they will understand something else also: such "methods" of economic management are an exception from the rule, they are our yesterday. And they are studying for the sake of the future and have to know how to work in a contemporary manner. Incidentally the computer can be a reliable helper here.

V. T. But for this to happen there have to be constant relations set up between enterprises and the PTU. So that the enterprises provide us with computers.

A. Ye. I think the question has to be posed more broadly. For example, in Leningrad it was understood much earlier than in other places that investments in vocational and technical education are the most profitable investments. There is nothing to complain about in the education of young workers. They, after all, are the future of the country.

Of course, not every plant will agree, for example, to outfit a PTU with the most modern (and, of course, not inexpensive) equipment. But above all this will be permitted itself by that enterprise which knows for sure that the PTU is training cadres precisely for it, and that its graduates will come into its shops, and not be distributed "piecemeal" anywhere and everywhere.

Only when there is a closed system "enterprise--PTU," will no one be stinting of money for a swimming pool and laboratory equipment, for machine tools and technical studios—all of which will reimburse itself a hundredfold.

V. T. And does this all not amount to the creation of technical creativity circles in which the youngsters will be dealing with microcalculators and integral circuits?

A. Ye. Well, there is nothing excessive in that. Although everything depends upon the real circumstances and characteristics of the branch and the PTU. At least, if I were in the place of a PTU teacher I would not reject a

single form of work with the youngsters which would awaken in them an interest in computers.

What is Required is...Universal Education

V. T. Meanwhile, I know that not only construction pupils, but even the pupils of certain machine building and radio engineering PTU today still are perplexed: what do we need programming for?

A. Ye. Well, the grasping of the new always begins with a lack of understanding. It means that educational and explanatory work has to be improved. Recently I was at a big enterprise. Machine tools with digital programmed controls, mechanized lines, processing centers.... Billets from the warehouse in mechanized carts are supplied directly to the shops....

V. T. Mechanized warehouses....

A. Ye. Right, right. Workers there, I emphasize, workers there themselves call themselves program resetters. This is already another level of self-consciousness and of self respect.

V. T. But do you mean to say it has not happened to you to encounter this kind of approach: if the PTU, it is said, is a radio engineering one then radio engineering is above all, and literature and mathematics are to be taken by the way. This also educates. But "narrow specialists." And computerization demands broad knowledge.

A. Ye. In general, there are two ways of "chaining" a man to his work. The first is to force him to forget about everything except that with which he is engaged. The second—on the contrary—is to cultivate in him that level of consciousness with which he cherishes that which he is doing not from a fear of losing it, but because he knows why it is necessary. This is more difficult, but it is precisely this task—on the maximal level—that has to be accomplished.

The same thing goes for the study of computer equipment if it is understood as a part of general education.

V. T. I only want to add a clarification: not only do the pupils have to be taught but also us teachers. So that we are aware of the role of computerization in the life of society. The computer today for many people is a mystery wrapped in mysteries.

A. Ye. Correct. For this reason I think that the "bottleneck" today is not equipment and not the children, but the teacher. It is necessary to do more work with him, and prepare him psychologically for computerization.

V. T. And what do you think of the use in the PTU of specialists from various branches of industry as teachers? For example, programmists, associates from Information and Computation Centers....

A. Ye. Koz'ma Prutkov had already observed that a specialist is like a swollen cheek....

But to be serious, I do not think that a narrow specialist can and should replace a teacher. We have already agreed: the process of education is not only vocational instruction. So that it is doubtful that a specialist will be able to cope with the role of the educator and mentor of young men and girls. No, a teacher is needed, but one who has a splendid mastery of the new course and ten times as much knowledge as today. It is above all for him that programming should become a second literacy.

And then the teacher will be able to interest his pupils.

The means and methods of activating instruction with the help of computers are innumerable: they are limited only by the limits of our fantasy and the degree of our knowledge of child psychology. However, the concrete organization of definite circumstances is very important. They should awaken activity and ardor in the child.

An interesting observation. Once, at examinations a consultation information system which had been created on the basis of a computer was used. The pupils crowded around the terminals. In order to lighten the load on the machine, two teachers were commissioned to conduct consultations. But they turned out to be without work. "We are not embarrassed to reveal our poor knowledge before a machine, but we are embarrassed before a teacher," the youngsters said.

Indeed, for many indicators a computer is a much more convenient source and controller of knowledge for children. On the one hand, it is an omniscient partner, while, on the other, it is only an implement, a thing. The computer creates an atmosphere of play which in instruction is much more valuable than real life: one can leave play without having lost one's dignity. It is obvious that the use of computer equipment reinforces the theory of any phenomenon. But today something else also has to become obvious: computerization itself is already an entire phenomenon. And we have to be ready for that which the computer will teach us.

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DEMOGRAPHY

PEREVEDENTSEV ON UNPREPAREDNESS OF YOUTH FOR FAMILY LIFE

Moscow KOMSOMOL'SKAYA PRAVDA in Russian 26 Apr 85 p 2

[Interview with Candidate of Economic Sciences Viktor Ivanovich Perevedentsev by N. Azhgikhina; date and place not specified: "The First Child"]

[Text] The first child: Its birth is a great event in every family. But are young parents always ready to fulfill their responsibilities, and for the forthcoming difficulties? Our correspondent asked these questions of Candidate of Economic Sciences Viktor Ivanovich Perevedentsev, a demographer.

[Answer] The birth of a first child fundamentally changes the life of a young family, filling it with new meaning and new cares.

There is a certain concept that specialists use--"trial of the first-born." For most young couples this "trial" opens up new joys, it enriches them, and it brings them closer together. But something else can happen as well: Family discord grows stronger with the first difficulties. We often hear-- not only from young fathers but also from mothers--that this child "dealt life a ruinous blow." Mutual displeasure accumulates, and the young family suffers a fall. Every year in our country there are hundreds of thousands of divorces, the overwhelming majority of which are among young families--in age and in the time of life together (less than 5 years). By court decision the children usually remain with the mother. According to statistics divorced women with children far from always remarry. The result today is that a significant number of children are brought up without a father in the home. And we are all well aware of the consequences of too "feminine" an upbringing, of an explicit or implicit "lack of a man around the house"--a malformed nervous system, insufficient preparedness for independent life, and trips to the court to resolve juvenile offenses.

[Question] Why is it that the "trial of the first-born" is sometimes more than young parents can bear? Is it shortcomings in their own upbringing, material difficulties, disinterest or, finally, youth?

[Answer] Youth, I think, has nothing to do with it. There are good 19-year old parents and there are helpless parents pushing thirty. Material and

housing difficulties which young people often cite as excuses do not play a decisive role either: Among couples that are materially relatively secure, the percentages of divorces are about equal. There is nothing surprising in that: Difficulties bring an initially strong family closer together, and they break up a weak family. Some women believe that if things are not going well at home, a child (sometimes a second one) would make things right. But I must say that things do not always come out this way. Especially if the parents are unprepared to care for an infant, irrespective of their age. And this, unfortunately, is sometimes the case.

I remember what it was like in a village in the postwar years: Girls often were already fully qualified as nannies--they knew how to put on diapers and rock an infant to sleep, and they knew what to do if the child suddenly got a stomach ache. For most modern urbanites without younger brothers and sisters, the first weeks and months with an infant are full of drama and surprises. According to the results of an anonymous nationwide questionnaire about half of the interviewed young couples admitted that they did not know much about bringing up children. And of course, most young people begin to get interested in such things when the baby is almost due; and even so, they do not always have the appropriate child-raising handbooks available, an experienced advisor is not always accessible, and sometimes their parents live in another city. Those who take their vows immediately after school, in which nothing has normally been discussed about family life until recently, find themselves in an especially difficult position. All of us demographers and sociologists have great hopes that the course on child raising that has been included in the school curriculum will be productive. For the moment it is too academic, but it will doubtlessly be improved. I believe that it will help adolescents to at least partially satisfy their unquenchable interest in questions for which they have no one to turn to for answers, except on the street. I believe that the number of 15- and 16-year-old mothers will decrease.

[Question] Many of our readers are troubled by this question: When from the point of view of science is the best time for a child to appear in the family--in the first year of marriage, or until the family's material base is stronger? What do you feel?

[Answer] Planned parenthood is one of the important accomplishments of civilization. But as with all accomplishments, it must be utilized competently.

It is important for each child to be loved and to be wanted, for its birth to be a joy, to bring the parents closer together and perhaps to awaken the thought of having a second and even a third child--in the interests of society, so that there would be more families with three children.

Of course, every family resolves this issue in its own way. Most young couples have their first child in the first years of marriage. In general, this is a good thing: Young parents have not yet acquired harmful habits and serious illnesses, and the young mother has greater energy; correspondingly, there are greater possibilities for not falling behind peers in career development. But this is far from being an axiom.

In recent decades the structure of the young family changed somewhat. When I was in school for example, there were almost no student families. Young people preferred to wait until getting their diplomas. Today the student family is a typical phenomenon. I am in favor of such families. But whether this means that students should immediately burden themselves with a baby carriage, I don't know. Student life itself presupposes a certain apartness from "adult" life, and would it not be better for young marrieds to first get to know each other better for a year or so, before deciding upon such a step? This pertains not only to students. There is perhaps no greater evil than hasty marriages. It would be nice if there weren't divorces just as hasty, something which neither the young father nor just as young a mother with children needs.

Recently M. Tol'ts, a well known demographer, published an article together with other authors on the structure of births in Perm--a city in the Urals with a population of about a million. According to the research results 317 out of 1,000 children were born after 9 or more months of marriage, 271 out of 1,000 were born in the first months of marriage, and 140 out of 1,000 were born out of wedlock. Moreover 272 out of 1,000 women who could have become mothers consciously decided not to. The following question arises: Would all marriages made in haste (because a child is about to be born) be strong and happy? Would all children whose birth was "unplanned"--in other words, not really desired--bring joy to unwed mothers and receive a good upbringing? And would all women who decide upon an abortion be able to have children later on?

Another anonymous study was conducted, and it was found that many women would have waited to have children, but they did not know how.

[Question] In the opinion of the experts, will the birth rate decrease further in the next few years?

[Answer] I am convinced of the reverse. First, many women will be able to preserve their health and have healthy children under favorable conditions. Second, there will be fewer homes "lacking a man around the house," and there would be fewer fights and tensions in families that had not expected a child. And finally, the wanted child would be brought up in an atmosphere of love and mutual trust.

[Question] Many scientists are studying the problems of the incomplete family. Are there ways to reduce their number?

[Answer] I have already mentioned some of such ways. And most important among them, as is even stated in recent party documents, is all-out reinforcement of the family, and attention to it on the part of directors, employers, educators and psychologists. I think that these measures will soon prove their worth. How soon they will do so depends on ourselves and on the activities of Komsomol organizations and their active members. As far as the concept of an "incomplete family" is concerned, it will probably always exist, as will people living alone--the "lonely," as we used to call them in the old times. Granted that persons ill suited to family life, persons

who don't need family life do occur, but they are but one in a thousand and a half! I think that there will be mothers living alone as well--those who consciously decide to bring up a child on their own, in view of the most diverse reasons. They will be few, but they will be around.

[Question] What would you advise to today's fiancees standing at the threshold of the marriage bureau?

[Answer] To think their choice out one more time. It often happens that a young girl marries without especially clear feelings of love--because she does not wish to be left on her own, because all of her friends are already married and so on. As a rule such women find themselves divorced a few years later, filling the ranks of the number of "incomplete" families. I would like to encourage today's brides to take things easy. They have no grounds to hurry, fearing that "according to the statistics there are 9 young men to every 10 girls." According to the statistics (if we consider that on the average girls are 3-4 years younger than their husbands-to-be), there are 75-85 young girls to every 100 men marrying for the first time. In rural areas the proportion is sometimes even smaller. So small as to warrant a return to the days when knights jousted for the hands of fair maidens. To sum up, I would like to remind today's fiancees of an old saying--"measure seven times before you cut." But will they listen to me?

[Question] We have basically been talking about young women and wives. And we seemed to have forgotten about the stronger half of mankind.

[Answer] I sympathize with this half of mankind in these times of the modern family and the demographic revolution. Nevertheless I believe that it will not soil its honor, that it will endure. And that it will even show who's master of the house. In the final analysis, after all, it is upon the master that peace and confidence in tomorrow depends, as does the question as to whether the first child in the family will be the only child, or whether the child will have a younger brother or sister. I am sure that the child will.

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DEMOGRAPHY

IMPROVEMENT OF WOMEN'S PARTICIPATION IN SOCIETY NOTED

Moscow VESTNIK STATISTIKI in Russian No 3, Mar 85 pp 61-65

[Article by Candidate of Economic Sciences L. Vorontsova, deputy chief, Department of Social Statistics, USSR State Statistical Administration: "Growth in the Level of Education and Social Activity of Women"]

[Text] The 30th Session of the UN General Assembly declared 1976-1985 to be the Decade of Women.

The goal of this important international act was to achieve fuller equality and wider participation of women in the economic, social and cultural development of their countries, and all-out improvement of their role in consolidation of peace, friendship and cooperation among nations.

The issue of the position of women in society has deep historical roots.

For many centuries women have fought for liberty and equality. Our country was the first state in which the problem of liberating and providing equal rights to women was methodically and conclusively solved.

The Great October Socialist Revolution, which marked a fundamental turning point in the politics and economy of our country, liberated women from exploitation and oppression and annihilated their lack of rights. One of the greatest social accomplishments was establishment of true equality between women and men in all areas of social and political life. "The Soviet government came closer to democracy than all other most progressive countries," wrote V. I. Lenin, "in that in its laws it left not even the slightest intimation of inequality of women."\*

In his work "Pages from a Diary" V. I. Lenin pointed out the enormous amount of work that had to be done by the Soviet state to eliminate cultural backwardness inherited from the old bourgeois-landowning Russia. He noted that surmounting this backwardness would require serious efforts. But our country possesses all possibilities for solving such a problem. Vladimir Il'ich wrote that "nowhere are the popular masses so interested in real culture as in our country; ...nowhere, in no single country is state power in the

\* Lenin, V. I., "Poln. sobr. soch." [Complete Collected Works], Vol 39, p 201.

hands of the working class, which in the main is fabulously aware of its shortcomings, not in culture but in literacy; nowhere is the working class so prepared to make sacrifices and is making such sacrifices, to improve its position in this relationship as in our country."\*

In prerevolutionary Russia almost three-quarters of the population aged 9-49 years was illiterate, while among women five-sixths were illiterate; only 12.5 percent of the women of rural areas were literate (2.8 times less than men). Women of the peoples of the Far North, Central Asia and other outlying districts of prerevolutionary Russia were illiterate almost throughout.

Lenin's 26 December 1919 decree on eliminating the population's illiteracy declared this to be the whole people's cause. State and trade union organs and active public figures were mobilized to fight illiteracy. The appeal "Every literate person, teach an illiterate one" had great significance in this effort. Work of gigantic scale was carried out in the country. Millions of illiterates were enrolled in grammar schools, and they were provided instruction in specially created "illiteracy liquidation points," in schools for persons with poor reading and writing abilities and in adult schools. Up to 60 million illiterate men and women received instruction in the country in the 20 prewar years (1920-1940).

The materials of the first postwar All-Union Census of 1959 attested to practical achievement of total literacy of the population. The literacy rate among women aged 9-49 was 98 percent (it was 99.3 percent among men).

Within a historically short period of time our country accomplished a stride from mass illiteracy to universal secondary education. This was promoted by creation of a single integrated state system of education that included pre-school institutions, schools of general education, and a network of secondary special, occupational-vocational and higher educational institutions. For the first time in world history a truly popular school insuring real equality among all citizens in obtaining education irrespective of sex, race, national origin and social position was created.

In 1981-1983 189,000 schools of general education were built in the USSR. As of the beginning of the 1983-1984 school year their number was 141,000, providing instruction to 44.5 million students, half of them being girls.

Economic development and scientific progress necessitated the training of specialized personnel. The network of higher and secondary specialized educational institutions enjoyed wide development in this connection. As of the beginning of the 1983-1984 school year their number was 5,200. The number of students enrolled in secondary special educational institutions increased by a factor of 4.6 between 1940 and 1983, while the number of students in institutions of higher education increased by a factor of 6.5. As is true with every young man, irrespective of nationality and social

\* Ibid., Vol 45, pp 364-365.

origin every young woman who desires it may be admitted to a higher or secondary special educational institution. The system of secondary and higher education of prerevolutionary Russia had a clearly pronounced class nature, and it served the interests of the nobility, czarist officials and the clergy. Only a small number of women, chiefly from the privileged strata of society, received an education in secondary special institutions, while still fewer did so in institutions of higher education, but even among these population groups the education level of women was significantly lower than that of men. The number of women who received a higher education (complete or incomplete) was 19 times lower than that of men according to the 1897 census.

Today women represent 58 percent of all students in secondary special educational institutions, and 53 percent in institutions of higher education. This is evidence of the democratic principles of organizing popular education, and of growth in the social activity of women. As with young men, young women may select whatever future specialty they desire. This is a great advantage over the capitalist system of organizing special education. Thus for example, in the USA only 26 percent of the persons enrolled in medical schools in 1980-1981 were young women, while in law schools their proportion was only 34 percent. In France, many institutions of higher education and professional schools are essentially closed to young women. Higher education is a man's privilege in Japan.

One indicator of the general availability of education in the USSR is free education provided to students in primary schools, secondary special educational institutions and institutions of higher education. The Soviet state spends enormous amounts of money on development of national education. In 1983 the state spent over 200 rubles per student in schools of general education, an average of over 750 rubles in special educational institutions, and over 1,100 rubles in institutions of higher education. Most students of the day departments of institutions of higher education and students of day departments of tekhnikums receive scholarships.

The system of evening and correspondence educational institutions has enjoyed wide development in our country. Presence of such educational institutions, as well as of a system of social privileges granted to some contingents of laborers (a reduced work week, an incomplete work day and so on) create great advantages for the working young, especially women, in raising the level of their occupational training at all levels of education, and in successful combination of work with family and personal obligations.

Successes in national education significantly increased the educational level of women, as is graphically evident from the table below.

In 1939 the number of women among persons with a higher and secondary (complete and incomplete) education was lower per 1,000 citizens than men by 29 percent, while in 1984 it was lower by 10 percent. The educational level of women employed in social production has for practical purposes converged with the educational level of men. Typically the educational level of women up to 35 years old is higher than that of men of the same age.

	Persons of the appropriate sex with higher and secondary (complete and incomplete) education, per 1,000		including			
	men	women	men	women	men	women
1	2	3	4	5	6	7
<b>Total population</b>						
10 years and older						
1939	127	90	11	5	116	85
1959	392	338	27	20	365	318
1970	522	452	48	37	474	415
1979	685	597	75	62	610	535
1984	726	652	88	77	638	575
<b>Employed population</b>						
1939	136	104	16	9	120	95
1959	434	431	34	32	400	399
1970	654	651	68	62	586	589
1979	810	801	102	98	708	703
1984	873	862	118	113	755	749

Socialist society opened up unlimited possibilities before Soviet women exercising their right to work. Owing to this, a high level of employment has been achieved among women. There is no sector of the national economy in which they are not working.

In 1983 women represented 51 percent of all laborers and white collar workers, 83 percent of workers in trade and food services, 82 percent in public health, physical education and social welfare, 75 percent in national education, and 74 percent in culture. Interesting in this respect are data from the pre-revolutionary census of 1897. In Czarist Russia 25 percent of women working as hired labor worked for landowners and wealthy peasants, 55 percent worked as domestics, while only 13 percent were employed at enterprises and construction projects and 4 percent were employed in institutions of education and public health.

Growth in the educational level of women promoted an increase in their employment in jobs requiring higher occupational training. In 1983 the number of women with a higher and secondary special education employed in the national economy was 22 times greater than in 1940.

Data from population censuses indicate a continuously growing level of employment of women in jobs involving mental labor. In the period between the last two censuses (1970-1979) the number of women doing predominantly mental labor

with respect to the total number of employed women increased from 31 to 36 percent; the proportion of women involved in predominantly physical labor decreased during the same period from 69 to 64 percent. The total number of women doing predominantly mental labor increased in 1979 by a factor of 1.4 in comparison with 1970, according to census data.

On the whole the number of woman specialists increased by a factor of 1.9 in 1971-1983, to 18.8 million persons as of 15 November 1983.

In late 1983 the number of woman scientific workers attained 57,700, or 40 percent of the total number of scientific workers in the country, and 14 percent of the doctors of sciences and 28 percent of the candidates of sciences were women. In 1940 the proportion of woman scientific workers in the quantity of scientific workers was 34 percent. In 1983, 31,400 women, or 32 percent of the total number of graduate students, were participating in graduate studies. In typical fashion, the proportion of women among scientific workers in the USA does not exceed 13.8 percent.

The desire to improve education became one of the characteristic traits of the socialist way of life. In 1984 about 106 million persons were involved in all forms of education in the country, and practically one of every two residents was studying. This pertains equally to both women and men.

Systematic efforts to raise the qualifications of women are promoting growth in their professional training. Women not only have possibilities equal to those of men in this area, but they also enjoy some advantages. This pertains primarily to women with children up to 8 years old. Retraining and advanced training is provided only with leave from the principal occupation, on the condition that the average monthly wage is retained during the training period. Among executives and specialists raising their qualifications, women represent about 50 percent.

Significant growth in educational level was a powerful stimulus for growth in the cultural demands of the entire population, including women. Satisfaction of constantly growing demands became possible owing to mass production of cultural articles and improvement of cultural and personal services.

In the present stage of developed socialist society, growth in cultural level is an important aspect of formation of the moral countenance of the Soviet citizen and his active life position. Speaking at the June (1984) CPSU Central Committee Plenum, CPSU Central Committee general secretary, Comrade K. U. Chernenko said: "To shape, to elevate the spiritual needs of the individual, to actively influence the ideological, political and moral countenance of the personality is the most important mission of socialist culture."

Growth in the educational level of women promoted their wide communion with the values of spiritual culture.

Television and newspapers are important sources of information among women of various social groups. The civic status and social activity of Soviet women manifest themselves in the fact that among materials published in the newspapers, they express their greatest interest in international life and foreign policy, in social life and in the national economy.

Soviet women are typified by a high interest in reading. The overwhelming majority of women read books regularly. One out of every three woman office workers and almost one out of every seven woman laborers read three or more books a month. In this case the interest expressed in reading by women with a higher level of education is even greater. Diverse are the reading interests of Soviet women. They show interest in various genres of creative literature, and they devote considerable attention to sociopolitical, special and popular scientific literature.

The survey materials showed that one out of every four woman laborers and one out of every three woman office workers go to the movies regularly--one or two times a month, and one out of every ten woman laborers and one out of every seven woman office workers go to the movies three or four times a month.

Not only are Soviet women users of spiritual valuables; they also participate extensively in their creation. According to data from a one-time survey made on 1 August 1982, about 10,000 amateur folk collectives were working in the country. A total of 433,000 persons were taking part in them. Women were active participants of amateur art. Their number was 243,000, or 56 percent of the total number of participants of amateur art.

Enrollment in people's universities is an indicator of the greater social activity of women. According to data as of 1 June 1980 there were 13.8 million students in people's universities, to include 7.7 million (or 55 percent) women.

The socialist state is promoting growth of the sociopolitical activity of women and encouraging their participation in the affairs of state administration. Today women represent about one-third of the deputies to the USSR Supreme Soviet, over one-third of deputies to the supreme soviets of the union republics, and 40-50 percent of deputies to the supreme soviets of autonomous republics and kray, oblast, okrug, rayon, city, town and village soviets of people's deputies. Moreover a large number of women are active in the soviets, they are working in elected organs of people's control and so on.

While their participation in labor and sociopolitical activity is high, women are still mothers and protectors of the family hearth, which requires Soviet society to take steps to achieve a more successful combination between their work and their family responsibilities. In this connection a large role is given to the family in the system of social measures being implemented by the state.

One of the most important tasks posed by the 26th CPSU Congress is to improve the working conditions, personal life and recreation of working women. Continual growth in the material welfare of the laborers is helping to solve this problem.

As compared to 1940, in 1983 the real per-capita income increased by a factor of 6.1. In this case the income of less-fortunate families, having three or more children as a rule, increased at a higher rate than the income of the

total population. In 1970 18 percent of the population had an income of over 100 rubles per month per family member, while in 1983 about 60 percent of the population had such an income.

Construction of new, fully equipped housing is playing a significant role in improving the personal conditions of Soviet people and, consequently, in making a housewife's work easier. Housing construction is proceeding on an enormous scale in the USSR. During the years of Soviet rule (1918-1983) 3.8 billion m<sup>2</sup> of total (useful) living space were placed into operation. Today over half of the residential buildings that have been placed into operation on the basis of state capital investments were built using new standard plans foreseeing an improved apartment layout and better comfort. About 80 percent of the urban population now lives in individual apartments.

One of the important ways to make homemaking easier for women is to mechanize the work and to improve personal services to the public.

In 1983 there were 90 refrigerators and freezers for every 100 families residing in cities and in the countryside, as compared to 32 in 1970; the corresponding figures for washing machines were 70 and 52, while for electric vacuum cleaners they were 36 and 12.

The volume of personal services provided to the public in 1983 increased by 2.8 times over the 1970 level. In the sphere of personal services, laborers could now obtain almost a thousand different types of services. The network of good offices bureaus is growing wider. This form of services is very popular because a woman can place various orders for apartment repair, window washing, floor waxing and so on.

Development of the network of stores and departments selling processed foods, cooked goods and other progressive forms of trade services is also promoting more economical use of homemaking time. Laundry, dry cleaning and clothing and shoe repair service points are being created right at the enterprises and in the kolkhozes, institutions and organizations for the convenience of working women; the sale of processed foods and cooked goods, preparation of food orders for later pick-up, traveling stores selling nonfood items and so on are also being organized. The integrated program for development of consumer goods production and the system of public services in 1986-2000 will promote further expansion of services.

From the first days of its existence the Soviet state assumed the responsibility for protecting the health of the mother and child. It is written in USSR and union republic legislation on public health that motherhood is protected and encouraged by the state in the USSR. The country has created a wide network of women's consultation offices, maternity homes, sanatoriums, and vacation homes for pregnant women and mothers with children. At the end of 1983 the number of women's consultation offices, children's polyclinics and outpatient clinics attained 26,800, as compared to 8,600 in 1940. The future mother is surrounded by the great concern of the state. Women are granted paid leave for pregnancy and labor lasting 56 calendar days prior to birth and the same period after birth. Pregnancy and labor assistance is paid during maternity

leave in an amount equal to the total wages, irrespective of time on the job. Working mothers enjoy the right to take partially paid leave to care for a child until it reaches an age of 1 year, and unpaid leave until it reaches an age of a year and a half. One-time state grants are paid to mothers upon the birth of their first child and subsequent children. Moreover mothers with large families (three or more children) receive monthly assistance.

Mothers with large families are surrounded by the respect of all the people. They are awarded the title and orders of "Mother-Heroine" and "Maternal Glory" and the "Medal of Motherhood." Families with children having a low average per-capita total income are paid an allowance for the children, and they are provided assistance in feeding an infant and in acquiring infant care articles.

The state is concerned to see that the new generation would grow up healthy and useful to its motherland. The network of preschool institutions, in which children undergo comprehensive development and education, and in which they are prepared for study in primary school, has enjoyed tremendous development. As of the end of 1983 the country had 135,500 preschool institutions (as compared to 200 in 1914) taking care of 15.5 million children.

Besides permanent preschool institutions, extended-day groups at schools of general education render great assistance to women in educating their children. Children go to such after-school groups to eat, to do their lessons and to rest. As of the beginning of the 1983-1984 school year there were 84,800 extended-session schools and schools containing extended-day groups. They were visited by 12.4 million students.

Thus equality of men and women in our country, guaranteed by the USSR Constitution, is being practically insured.

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